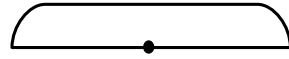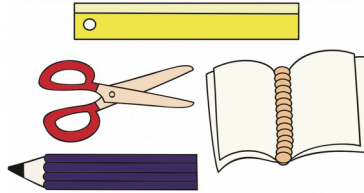## Homework for Lesson № 5

1 **Select appropriate drawings and complete them to solve the word problems:**
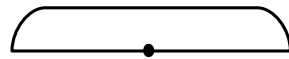
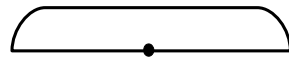**A.** There are *x* pencils in one box and *y* pencils in another. How many pencils are in both boxes?

_____

B. There are *x* pencils in the first box and *y* pencils in the second. How many more pencils are in the first box than in the second?
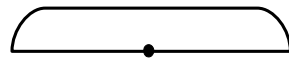
_____

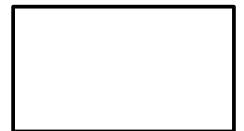**C.** There are *x* pencils in each of *y* boxes. How many pencils are there in total?

_____

D. A box has *q* pencils, which is *p* pencils more than in another box. How many pencils are in the second box?
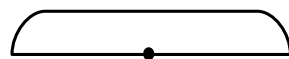
_____

E. There are *m* pencils in one box and *n* in another. Carol took *k* pencils from each box. How many pencils remained in these boxes in total?

_____

F. There are *m* pencils in each of *n* boxes. Carol took *k* pencils from each box. How many pencils remained in these boxes?

_____

2 **In your notebook** solve the equations. Copy your answers below.

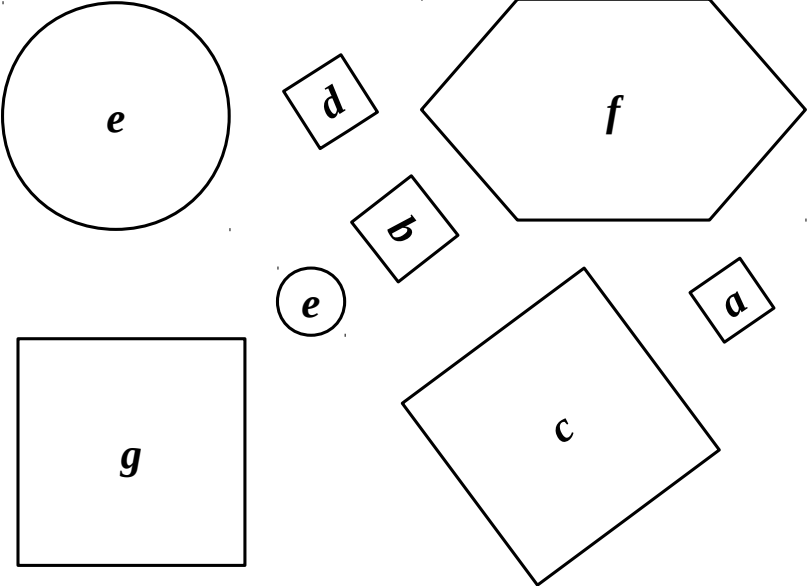$128 - x = 59$ $y + 186 = 501$ $z - 48 = 97$

$x =$ _____ $y =$ _____ $z =$ _____

3   In the picture below, set **P** is a set of squares and set **Q** is a set of Large shapes. Draw a Venn Diagram for these sets.

Venn Diagram:

Which shapes belong to set **P**, but not to set **Q**? _____

Which shapes belong to set **Q**, but not to set **P**? _____

Which shapes belong to both sets? _____

Looking at your Venn Diagram, fill in the blanks with ∈ (belongs) or ∉ (does not belong):

a _____ **P**   *f* _____ **P**   *j* _____ **P**   *c* _____ **P**

a _____ **Q**   *c* _____ **Q**   *g* _____ **Q**   *d* _____ **Q**

4 Compare:

$x - 5 \,\square\, x - 9$ 　　　　　$y + 5 \,\square\, y + (5 - 1)$ 　　　　　$w \times 3 \,\square\, w + w + w$

$z - (x + 2) \,\square\, z - x$ 　　　　　$z - (x + 2) \,\square\, z - x - 2$ 　　　　　$x \times 4 \,\square\, x \times 3 + x$

5 For each equation, select the best diagram (multiple choice):

Do not solve the equation !

$534 - x = 267$

$x \times 131 = 5109$
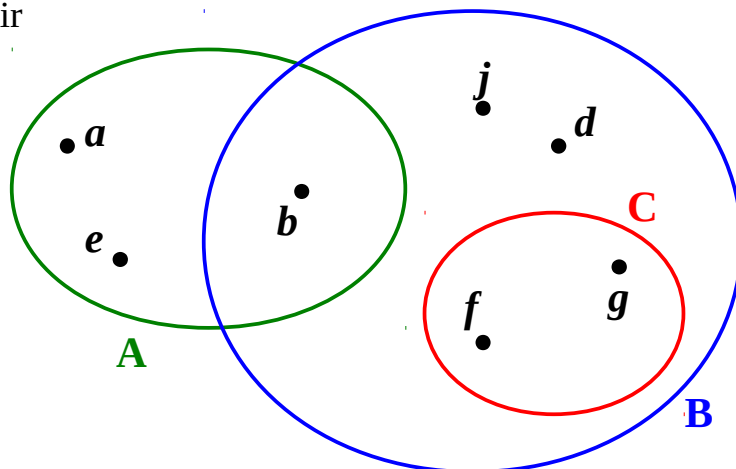

$x + 359 = 1077$

$7923 \div x = 19$

6 Use the Venn Diagram on the right to list the elements in sets **A**, **B**, and **C** and their intersections:

A = { _____ , _____ , _____ }

B = _____

C = _____

A ∩ B = _____   A ∩ C = _____   B ∩ C = _____

7 Mark the order of operations and evaluate the expressions:

$24 \div 6 \times 2 =$ _____ $8 \times 3 + 5 \times 4 =$ _____ $43 + 20 - 5 =$ _____
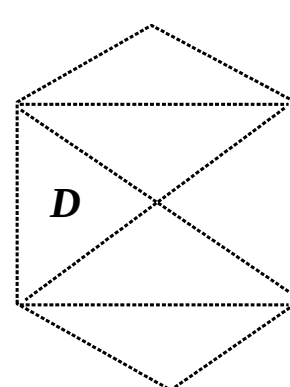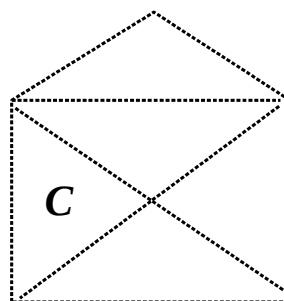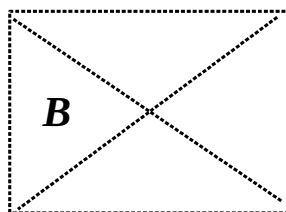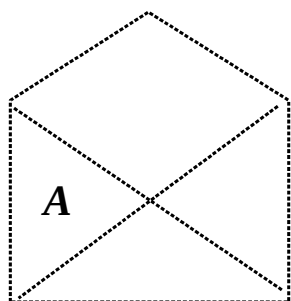
$18 + 3 \div 3 =$ _____ $(18 + 3) \div 3 =$ _____ $36 \div (13 - 4) =$ _____

8 Circle the shapes that you can trace without following twice any line and without lifting your pencil? Cross out the ones you cannot.
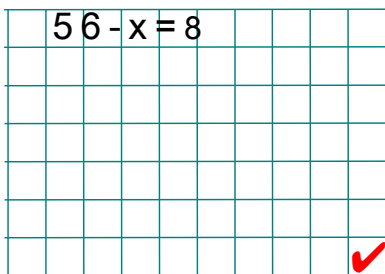
A   **B**   **C**   **D**

9 There are 5 cookies and q candies in each of w plates ($q > 5$). What will we find if we perform the following operations?
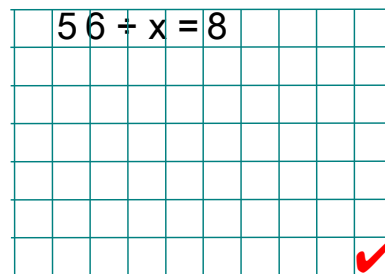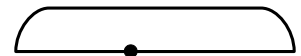
$5 + q$	
$5 \times w$	
$q \times w$	
$q - 5$	
$(q + 5) \times w$	

10 For each equation choose the correct diagram. Use it to solve the equations and then check your answer.

$5\,6 - x = 8$

$5\,6 \div x = 8$

11 Suppose that you have never met Little Joe and Foxy Tail so you do not know how they look. However, you know that Little Joe always tells truth and Foxy Tail always lies.

What will each brother answer if you ask him "*Are you FT*"?

LJ:____ **FT:** _____

What single YES/NO (*polar*) question could you ask the brothers to identify them?
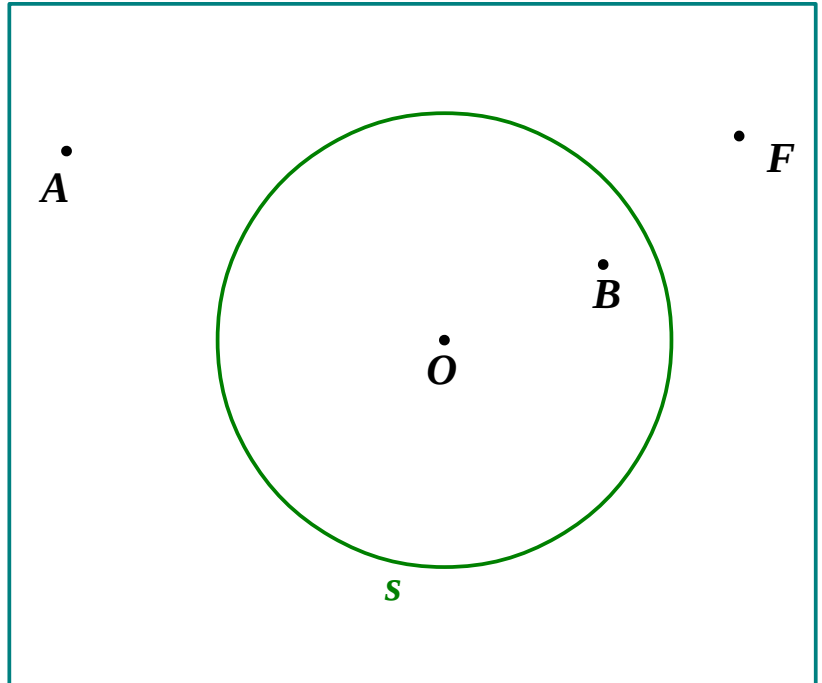
_____

12 Look at the drawing.

s = Circ(O, 3 cm)

1. Plot straight line AB.

2. Find and label points R and T on the intersection of the straight line AB and the circle s:

$\{R, T\} = s \cap AB$

3. Plot q = Circ(O, 4 cm)

4. **Analyze what the next line means and follow its instruction:**

Find and label points V, and W: $\{V, W\} = q \cap AB$

13 Check ✔ the TRUE statements; cross ✗ the False statements.

☐ $W \in$ Circ(O, 3 cm)   ☐ $R \notin$ Circ(K, 4 cm)

☐ $W \in q \cap AB$ ☐ $B \notin q \cap AB$

☐ $O \in AB$ ☐ $V \notin RT$

14 Foxy Tail went out and found 5 coins laying on a curb. How many coins would he and his brother Little Joe have found if they went together?

_____